

comparison with a PBX having limitations on the maximum capacity for
accommodatable lines.

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) A concentrator for voice telephones installed in a LAN comprising a LAN switching unit for switching and connecting a plurality of interfaces, and a plurality of LAN hubs accomodating equipment connected to the LAN switching unit via the interfaces, respectively, and for performing data communication over the LAN, said concentrator comprising:

a LAN interface connected to the LAN switching unit;

at least one voice telephone; and

at least one set of voice telephone interfaces connected to the at least one voice telephone, wherein digital or analog voice data transmitted and received by the at least one set of the telephone interfaces are converted into MAC frames or IP packets, and the digital or analog voice data converted into the MAC frames or IP packets are relayed to the LAN interface.

2. (Amended) A concentrator for voice telephones according to Claim 1, further comprising:

a CPU; and

a second LAN interface for performing transmission and reception of data between the CPU and one of the LAN hubs.

3. (Amended) A concentrator for voice telephone according to Claim 1, wherein signals from circuits of analog telephone networks subscribers are converted into call control protocols according to TCP – IP so as to be able to accommodate the analog telephone subscribers' terminals.

4. (Amended) A concentrator for voice telephone according to Claim 1, further comprising:

a CPU; and

a second LAN interface for performing transmission and reception of data with the CPU and wherein the digital or analog voice data received from the at least one voice telephone is converted into TCP – IP packets or UDP – IP packets, and the TCP – IP packets or UDP – IP packets are transmitted and received via the second LAN interface.

5. (Amended) A concentrator for voice telephones according to Claim 4, further comprising a router connected to the second LAN interface for connecting the second LAN interface to either the outside of the LAN or the LAN hubs.

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6. (Amended) A method of communication over a LAN comprising a plurality of LAN hubs coupled to computing equipment for performing data communication, a plurality of concentrators coupled to voice telephones, and a LAN switching unit, having a plurality of ports and for switching and connecting between the plurality of the LAN hubs, and the plurality of the concentrators for voice telephones, the method comprising the step of:

performing call control for the voice telephones coupled to each of the concentrators with the computing equipment in each of the LAN hubs.

Please add the following new claims:

10. A system for communicating with voice telephones over a LAN, comprising:

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a LAN switch;

a plurality of LAN hubs performing data communication and coupled to the LAN switch via respective first LAN interfaces;

computing equipment coupled to the LAN hubs via respective second LAN interfaces;

a plurality of concentrators coupled to the LAN switch via respective third LAN interfaces; and

voice telephones coupled to the concentrators via respective voice interfaces that transmit and receive digital or analog voice data, wherein the concentrators are adapted to receive the digital or analog voice data from the voice interfaces and convert it into MAC

frames or IP packets and to relay the converted digital or analog voice data to the third LAN interfaces.

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cont.*

11. The system of Claim 10, wherein the concentrators each comprise a CPU, and further comprising fourth LAN interfaces coupled between the CPUs and respective ones of the LAN hubs for transmitting and receiving data.

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cont.*

12. A telecommunication apparatus for voice telephones installed in a LAN including a plurality of LAN equipment, the telecommunication apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and the at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call control data into IP packets or MAC frames and transmit the IP packets or MAC frames to the at least one LAN interface.

13. The telecommunications apparatus of claim 12, further comprising a router connected to at least one LAN interface and to a LAN hub or outside of the LAN.

14. The telecommunications apparatus of claim 12, wherein the LAN equipment includes one of a LAN hub and a LAN switching unit.

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15. The telecommunications apparatus of claim 12, further comprising a LANC circuit coupled to the CPU and voice telephone interface for assembling and disassembling a MAC frame.

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16. The telecommunications apparatus of claim 12, wherein the call control data are converted into a call control protocol according to TCP/IP.

17. The telecommunications apparatus of claim 12, wherein the set of voice telephone interfaces are adapted to perform a BORSCHT function.

18. A telecommunication apparatus for voice telephones installed in a LAN including a plurality of LAN equipment, the telecommunication apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and the at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call

control data into TCP/IP packets or UDP/ IP packets and transmit the packets to the at least one LAN interface.

19. The telecommunications apparatus of claim 18, further comprising a router connected to the at least one LAN interface and to a LAN hub.

20. The telecommunications apparatus of claim 18, further comprising a router connected to the at least one LAN interface and to an external network.

21. A method of communication over a LAN, comprising:

receiving and transmitting digital and analog voice data or call control data between a voice telephone interface and a voice telephone;

receiving and transmitting the digital and analog voice data or call control data between the voice telephone interface and a CPU;

converting the digital and analog voice data or call control data into IP packets or MAC frames with the CPU; and

transmitting the IP packets or MAC frames from the CPU to a LAN interface.

22. The method of claim 21, further comprising transmitting the IP packets or MAC frames from the LAN interface to a router.